

I have never cut through an entire *Antedon eschrichti*, I am unable to say positively that this is the case, though it certainly is so in *Pentacrinus decorus*.

This parambulacral network extends right down along the food-grooves, being especially developed among the sacculi (woodcut, fig. 8, *a.d.*); and it forms an annular plexus in the connective tissue of the lip, but of course farther from the mouth than the ambulacral nerve-ring. Bipolar, and occasionally multipolar cells are in connection with its finer fibrils, which can be followed very close to the superficial epithelium. Hardly any traces of it are visible in the interpalmar areas between the ambulacra, which are chiefly occupied by the water-pores, though it is extensive enough at their sides. I have seen it more or less satisfactorily in various other disks of *Antedon eschrichti*, in *Antedon rosacea*, and in *Antedon carinata* (Pl. LX. fig. 2, *ad*); and I have no doubt that the action of suitable reagents upon fresh material would give very valuable results. [See Appendix, Note G.]

In the mean time I would draw attention to Hamann's figures of the "zu der Epidermis abgehenden Nervenzüge, die man kurzweg als Hautnerven bezeichnen kann" in *Synapta digitata*.¹ If the structures described above as forming the parambulacral network in *Antedon eschrichti*, *Actinometra parvicirra*, *Actinometra nigra*, &c. (Pl. LIX. figs. 6, 7; woodcuts, figs. 4, 5, 7, 8), be not "Hautnerven," I am entirely at a loss to understand their nature.

The same fibrillar threads appear in the disk of *Pentacrinus*, not only in the plates of its ventral surface, but also in those which are developed on the perisome uniting the rays and support it below. Many of these plates, including those on the anal tube, are produced into small blunt spines, and these "Hautnerven" extend from plate to plate, sending delicate fibrils up into the spines, as shown in Pl. LIX. figs. 2-4, *ad*. I have many sections which contain these fibres in the plates on the sides of the disk, and they are evidently derived from the axial cords of the rays and arms, which give off numerous branches. Even in the basal plates I have found branches extending from the axial cords towards the surface of the skeleton, as shown in the diagrammatic figure on Pl. LXII.; and a curious modification of this occurs in one of the basals of the *Pentacrinus wyville-thomsoni* which was devoted to anatomical research. The two secondary cords (Pl. XXIV. fig. 7, *ar*) which result from the bifurcation of the primary interrarial trunk (*ai*) and eventually enter different radials, are united to one another within the substance of the basal plate by a commissure. This reminds one at once of the horizontal commissure discovered by Ludwig in the radial axillary, by which the individual cords of the two arms borne by the axillary are united immediately beyond their point of separation.

The arrangement of the axial cords within the radials of *Pentacrinus* or *Metacrinus* is exactly the same as in the Comatulæ. The primary trunks which proceed from the angles of the chambered organ (Pl. XXIV. fig. 7; Pl. LVIII. figs. 1, 3, *ai*) fork within the basals; and the two secondary cords which result from the bifurcation pass out from

¹ *Op. cit.*, *Zeitschr. f. wiss. Zool.*, Bd. xxxix. p. 322, Taf. xxii. figs. 43-45.